

A REMARKABLE NEW SPECIES OF MARINE ISOPOD,
ERICHSONELLA CRENULATA N. SP., FROM
NEWPORT BAY, CALIFORNIA*

ROBERT JAMES MENZIES

The collections of the Allan Hancock Foundation have recently been enriched by three specimens of an idotheid isopod, the gift of Mr. J. Laurens Barnard, who collected them from the marine plant *Zostera*, at Newport Bay, Orange County, California. The specimens appear to represent the first record of the genus *Erichsonella* from the Pacific Coast of North America. It is true that Boone (1923, pp. 154-155) described *Erichsonella pseudoculata* from Laguna Beach, California; however, it seems evident from the description that her species does not belong in the genus. The following species then apparently represents the only known species belonging to *Erichsonella* from the North American Pacific Coast.

ERICHSONELLA CRENULATA new species

Plates 8 to 10

Holotype. Male, length 23.0 mm., width at widest part of second peræon somite 3.0 mm. A.H.F. No. 492.

Allotype. Ovigerous female; length 17.0 mm., width 3.0 mm. A.H.F. No. 492a.

Figured paratype. Male; length 20.0 mm., width 2.2 mm. A. H. F. No. 492b.

Diagnosis. First frontal lamina (projecting lamina between first antennæ and below frontal margin) bifid; second frontal lamina widely concave at distal margin. Dorsum of cephalon with a conical, apically tri-tuberculate elevation. Eyes subovate. Lateral margins of peræon projecting at epimeral areas giving body a crenulate appearance. Pleotelson widest near distal end; posterolateral angles each with a small depression; distal medial projection of pleotelson evenly rounded.

Character of body. Entire animal very elongate, about 8 times as long as wide. Color in alcohol a light brownish green.

Cephalon. Median frontal margin almost straight; antero-lateral areas projecting distally farther than medial frontal

*Contribution from The Allan Hancock Foundation.

margin. First frontal lamina bifid, extending forward about one half the length of the first article of the first antenna. Second frontal lamina (the projection ventral to the first frontal lamina) does not extend forward beyond the first frontal lamina. Third frontal lamina not visible in dorsal view. Eyes subovate, located on lateral margin and slightly swollen laterally. Dorsum of cephalon with a conical, apically trituberculate elevation.

Peræon. Somites of peræon in general smooth, lacking swollen supralateral projections; lateral margins extended laterally at epimeral areas. Epimeral plates visible in dorsal view on somites 2-7 inclusive. First somite shortest (as measured on mid-line), fourth somite longest, about two and three-fourths times the length of first and one and one-half times the length of seventh somite. An elevated tubercle is conspicuous in the mid-dorsal line at the posterior margin of somites 1-5 inclusive.

Pleon. Composed of a single somite with possibly two very indistinct lateral incisions on either side indicating somite separation in the proximal one third of the pleon. Postero-lateral area flaring, conspicuously wider than anterolateral area. Postero-lateral angles each with a small depression; distal margin of pleotelson projecting, evenly rounded. Distal apex of uropod pointed, a single ciliated seta present on inner surface at disto-medial joint of first article.

First antenna. Composed of four segments; first and third segments subequal in length, third one and one-half times the length of second, fourth segment slightly longer than second and bearing the usual filamentous setæ on its medial margin.

Second antenna. Exceeds one half the body length. Peduncle composed of five segments; first segment very short, second and third segments subequal in length, fourth segment the longest, two times the length of third, fifth segment about two thirds the length of fourth. Flagellum composed of a single clavate segment which exceeds the fourth peduncular segment in length.

Maxilliped. Palp with four articles; only one coupling hook present on each endognath.

First pair of maxillæ. Composed of two lobes; apex of outer lobe with 14 setæ, that of inner lobe with 3 stout ciliated setæ and two smaller simple setæ.

Second pair of maxillæ. Composed of two lappets; outer lappet bilobed, apex of each lobe with 7 denticulate setæ; inner lappet apex with 14 setæ.

Mandible. Left mandible incisor with 4 teeth, lacina with 3 teeth, setal row with about 11 setæ, molar process tubular, toothed

on outer edge, with over 10 spinulate setæ in setal mass. Right mandible incisor with 4 teeth, lacinoid seta with 2 teeth (outer edge), setal row with 10 setæ, molar process with fewer but larger teeth than left, over 17 spinulate setæ in setal mass of molar process.

Penis. Composed of a medially cleft plate appearing as two separate pieces. Pieces distinctly fused at base.

Pleopods. Exopod of first pleopod margined with plumose setæ, endopod with plumose setæ on lateral margin and apex. Exopod of second pleopod with plumose setæ on lateral margin and apex, endopod with plumose setæ at apex only: male stylus exceeds distal extent of exopod but does not extend beyond the plumose setæ of exopod. Third, fourth, and fifth pleopods with both branches fleshy, lacking plumose setæ.

First peræopod. In general lacks heavy, stout setæ. Carpus with one stout seta on inferior margin. Dactyl bi-unguiculate.

Seventh peræopod. Lacks stout setæ. Dactyl bi-unguiculate.

Sexual dimorphism. Ovigerous female specimen considerably widened laterally at the peræon somites concerned with marsupium development.

Type locality. Upper Newport Bay, Orange County, California. Clinging to the blades of the marine plant *Zostera*. November 20, 1949. Collector Mr. J. Laurens Barnard.

Remarks. The proposed new species differs from *Erichsonella attenuata* (Harger) (Richardson, 1905, p. 400-401), which of the known American species it most closely resembles, in having the dorsum of the cephalon provided with a conical elevation, a pleotelson conspicuously widened distally, and a bifid first frontal lamina. In *E. attenuata* the cephalic area lacks a conspicuous elevation, the pleotelson is distally scarcely wider than the proximal part, and the first frontal lamina is simple and cuminate.

LITERATURE CITED

- COONE, P. L., 1923. New Marine tanaid and isopod Crustacea from California. Proc. Biol. Soc. Washington, vol. 36, pp. 147-156.
- RICHARDSON, H., 1905. A monograph on the isopods of north America. Bull. U. S. Nat. Mus., No. 54, 727 pp.

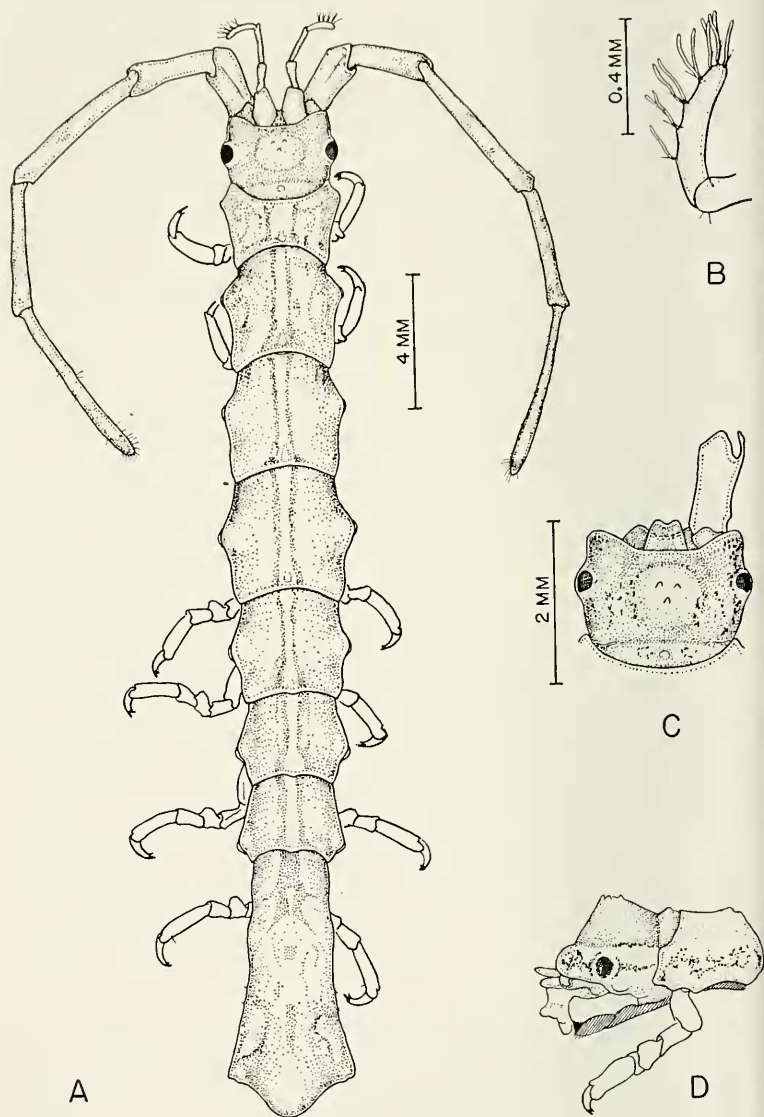


PLATE 8

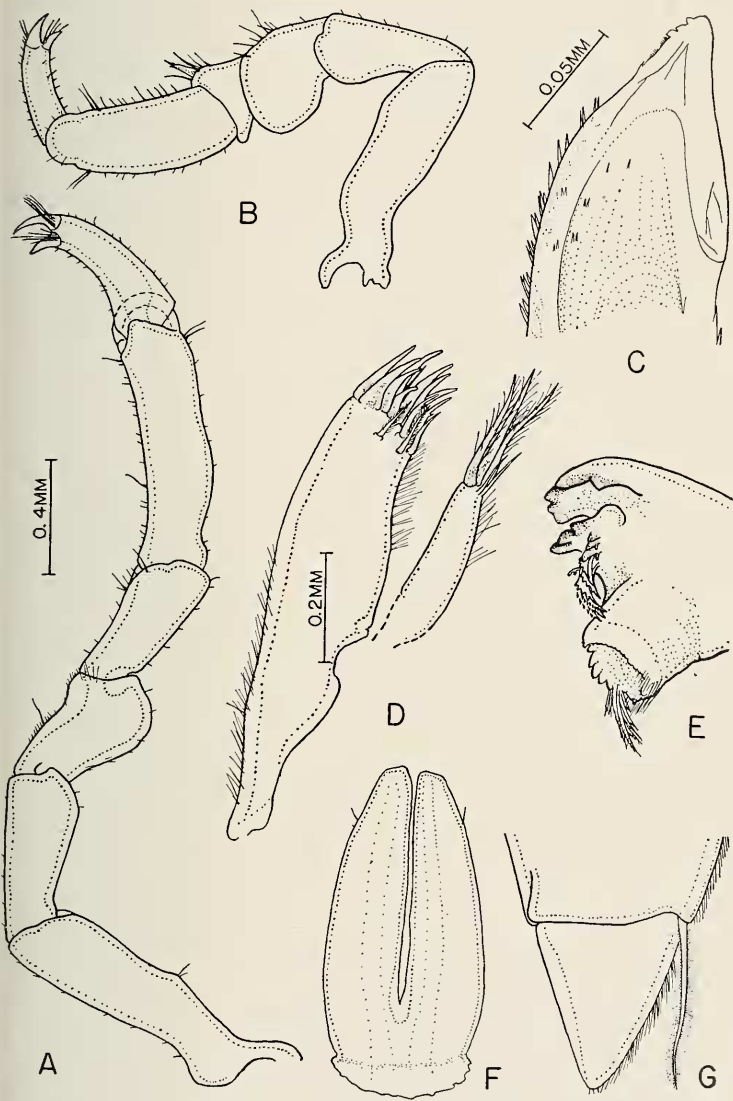


PLATE 9

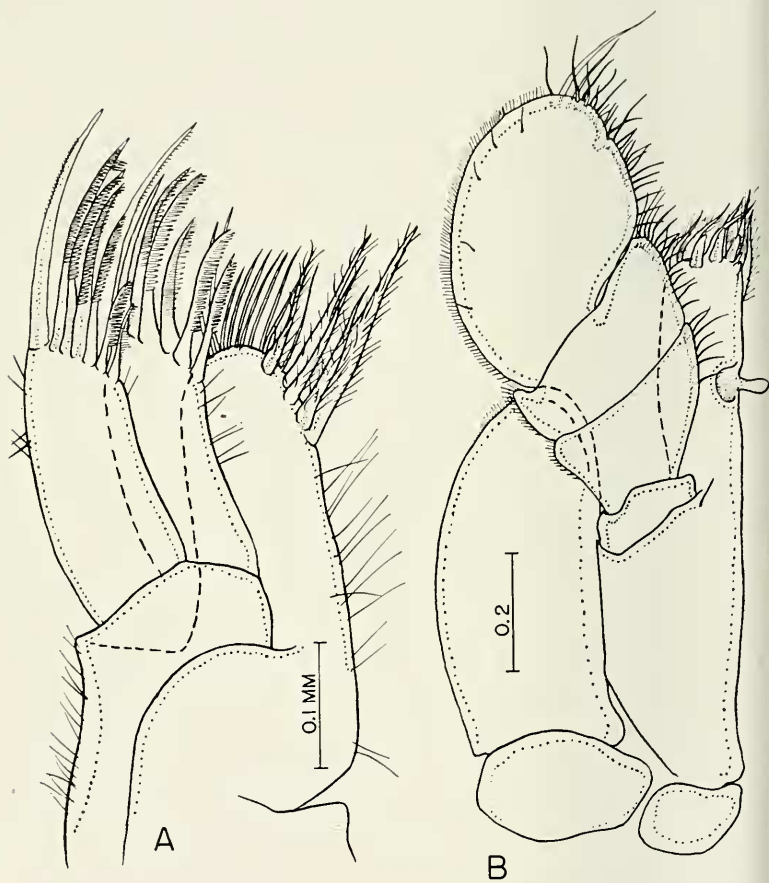


PLATE 10

PLATE 8

Explanation of Figures

ERICHSONELLA CRENULATA n. sp.

(Paratype, Male)

- A. Entire animal, dorsal view.
- B. Terminal article of first antenna.
- C. Cephalon, dorsal view.
- D. Cephalon, lateral view.

Magnification: C and D with scale same as for C; others as indicated.

PLATE 9

Explanation of Figures

ERICHSONELLA CRENULATA n. sp.

(Paratype, Male)

- A. Seventh peræopod.
- B. First peræopod.
- C. Tip of stylus of second pleopod.
- D. First maxilla.
- E. Left mandible, terminal portion.
- F. Penis.
- G. Tip of uropod, inner surface.

Magnification: A, B, G, scale same as for A; D, E, F, scale same as for D; C as indicated.

PLATE 10

Explanation of Figures

ERICHSONELLA CRENULATA n. sp.

(Paratype, Male)

- A. Second maxilla.
- B. Maxilliped.

Magnification: As indicated by scale.